

**DRAFT SCREENING SITE INVESTIGATION
FOR THE
LEWISTOWN SMELTING AND REFINING CO.
3100 BACK MAITLAND ROAD
MAITLAND, MIFFLIN COUNTY, PENNSYLVANIA
ECKEL SITE NUMBER 302**

Prepared for

U.S. Environmental Protection Agency Region 3
Hazardous Property Cleanup Division
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Remedial Action Contract No. 68-S7-3002
Work Assignment No. 048-PAPA-03ZZ
Project No. I4185.47502.0903

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1.0 INTRODUCTION

Under Remedial Action Contract (RAC) No. 68-S7-3002, Work Assignment No. 048-PAPA-03ZZ, U.S. Environmental Protection Agency (EPA) Region 3 tasked Tetra Tech, Inc. (Tt), to assist EPA Region 3 in the assessment of properties suspected to have been former lead smelter foundries. Tt subcontracted completion of this work assignment to Tetra Tech EM Inc. (Tetra Tech).

Former lead smelter sites nationwide were identified in an April 2001 article published in the American Journal of Public Health by Eckel, and others (Eckel study) (Reference [Ref.] 1). The majority of these lead smelters operated prior to 1964 and closed before the current environmental regulations were instituted. As part of the Eckel study, soil samples were collected from several of the identified former lead smelter properties. Results from the analysis of these soil samples indicated that concentrations of lead exceeded EPA's recommended screening level for lead in residential soils. The results of the Eckel study indicate that the air disposition of lead into soils from the former smelter operations may present an ongoing public health concern due to exposure of residential populations, especially children, located in the vicinity of these former lead smelters, to soils containing elevated concentrations of lead (Refs. 1, 2, and 3).

The Eckel study identified 77 properties that may have been formerly used as lead smelters within EPA Region 3 (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia). EPA Region 3 is currently investigating these 77 properties. The objective of EPA's investigation of these properties is to (1) determine the potential for lead-contaminated soil to be present at the former lead smelter site or nearby properties (2) identify any populations that may be at risk to exposure to this soil, and (3) determine if soil sampling is warranted at any of these sites or nearby properties.

The following activities were completed as part of the initial screening investigation of each of these former lead smelter sites: (1) verify the former lead smelter address listed in the Eckel study through historical Sanborn fire insurance maps, tax parcel information, and/or contacting local agencies, (2) determine if the site is listed in EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database, (3) determine through census information and existing maps the number of schools, daycare centers or recreational parks that exist near the former lead smelter site, (4) determine the population residing within a 4-mile radius of the site, (5) conduct a windshield reconnaissance of the site and surrounding area to document the current land use, identify any exposed soil and verify the existence of any schools, daycare centers or parks in the immediate area, and (6) review all information acquired to determine if the collection and analysis of soil samples is warranted at the site or at any nearby property.

This report summarizes the findings of the tasks outlined above for the former lead smelter known as the Lewistown Smelting and Refining Co, Inc. located at 3100 Back Maitland Road in Maitland, Mifflin County, Pennsylvania, 17044 . Each former smelter property was given a number in Eckel's study. The Eckel study number for this site is 302 (Ref. 1).

2.0 SITE LOCATION

The former Lewistown Smelting and Refining Co, Inc. located at 3100 Back Maitland Road in Maitland, Mifflin County, Pennsylvania, 17044. The geographic coordinates of the former Lewistown Smelting and Refining Co, Inc facility are 40.6040800 north latitude and 77.473300 west longitude on the Alfarata, Pennsylvania Quadrangle, 7.5 minute series, United States Geological Survey topographic map (see Appendix A, Figure 1). The site is currently listed in EPA's CERCLIS database as Jack's Creek/Sitkin Smelting and Refining Inc (EPA ID. PAD980829493) (Ref. 4). An aerial photograph of the vicinity of the former lead smelter site has been included in Appendix A, Figure 2. This aerial photograph reveals the exposed soils and any identified areas of potential concern such as schools, daycare centers, or parks located within a half-mile radius of the site.

3.0 SITE OBSERVATIONS

On February 10, 2006, Tetra Tech completed a non-sampling windshield reconnaissance of the Lewistown Smelting and Refining Co. site and surrounding area. A photographic record of the current site conditions is included in Appendix B. Figure 3, shows the current layout of the site and surrounding area as observed during Tetra Tech's site reconnaissance. The following observations were recorded:

- The subject property is currently occupied by Krentzman's Junkyard, a scrap metal recycling business. The junkyard is surrounded by a chain-link fence with an entrance gate along Maitland Road. The gate opens directly to the office and junkyard.
- The eastern portion of the subject property was listed on the National Priorities List for hazardous waste site cleanup in 1988 as a result of contaminated soil associated with former smelting activities. Contaminants detected in the soil include lead, cadmium, copper, silver, zinc, dioxins, and polychlorinated biphenyls. Lead contaminated soils and contaminated building debris (post demolition) were excavated and encapsulated on site. Sediment in Jack's Creek, which is adjacent to the site, containing concentrations of lead in excess of 110 ppm were vacuumed and encapsulated on site. Approximately 200,000 cubic yards of contaminated soil and miscellaneous building debris were encapsulated on site. Fishing advisory notices were posted along Jack's Creek in the vicinity of the site. Deed restrictions to limit on site soil disturbance and not permit installation of groundwater wells were installed. A contaminated soils containing concentrations of lead in excess of 1,000 parts per million were excavated and removed from the adjacent church property. Groundwater, surface water, and biota sampling are conducted on a semi-annual basis (Ref. 5).
- The subject property is located in a rural area comprised mostly of wooded lands, open meadows, and scattered residential homes.

- Directly south of the site is a parking lot for the junkyard. Beyond the parking lot is a residential trailer park with large open yards and children's play equipment. Directly west of the site is a small residential property with a grass yard and playground abutting the fence to Krentzman's junkyard.
- To the east, less than one quarter mile from the site is a church with a large picnic area, baseball field, and playground.
- Jack's Creek, a small stream, is adjacent to the subject property to the north.
- No schools or daycare centers were identified in the immediate vicinity of the subject property.

4.0 POTENTIAL TARGETS

Potential targets identified that may be exposed to lead-contaminated soils remaining in the vicinity of the former Lewistown Smelting and Refining Co site include the nearby residential population. The population within a 4-mile radius of the site is summarized in the table below (Ref. 5).

Population within a Four-mile Radius of the Site

Distance Ring (miles)	Population (number of persons)
0.0 to 0.25	0
0.25 to 0.5	27
0.5 to 1.0	50
1.0 to 2.0	752
2.0 to 3.0	1,397
3.0 to 4.0	2,107

Source: U.S. Department of Commerce. Landview V Environmental Mapping Software based on the Bureau of Census 2000 Population Data. December 6, 2005.

No schools or daycare centers were identified within one-half mile of the site. A church containing a picnic area, baseball field, and playground is located approximately one-quarter mile from the site to the east.

5.0 FINDINGS AND RECOMMENDATIONS

The site is located in a predominantly rural area of Mifflin County, Pennsylvania. Exposed soils were observed in the nearby vicinity of the property formerly used as a lead smelter. A residential property is adjacent to the former lead smelter to the west and a residential trailer park is located directly south of the former lead smelter. To the east, less than one quarter mile from the site, is a church with a large picnic area, baseball field, and playground. A small stream is adjacent to the former lead smelter.

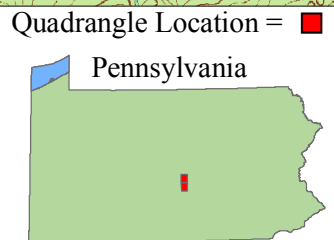
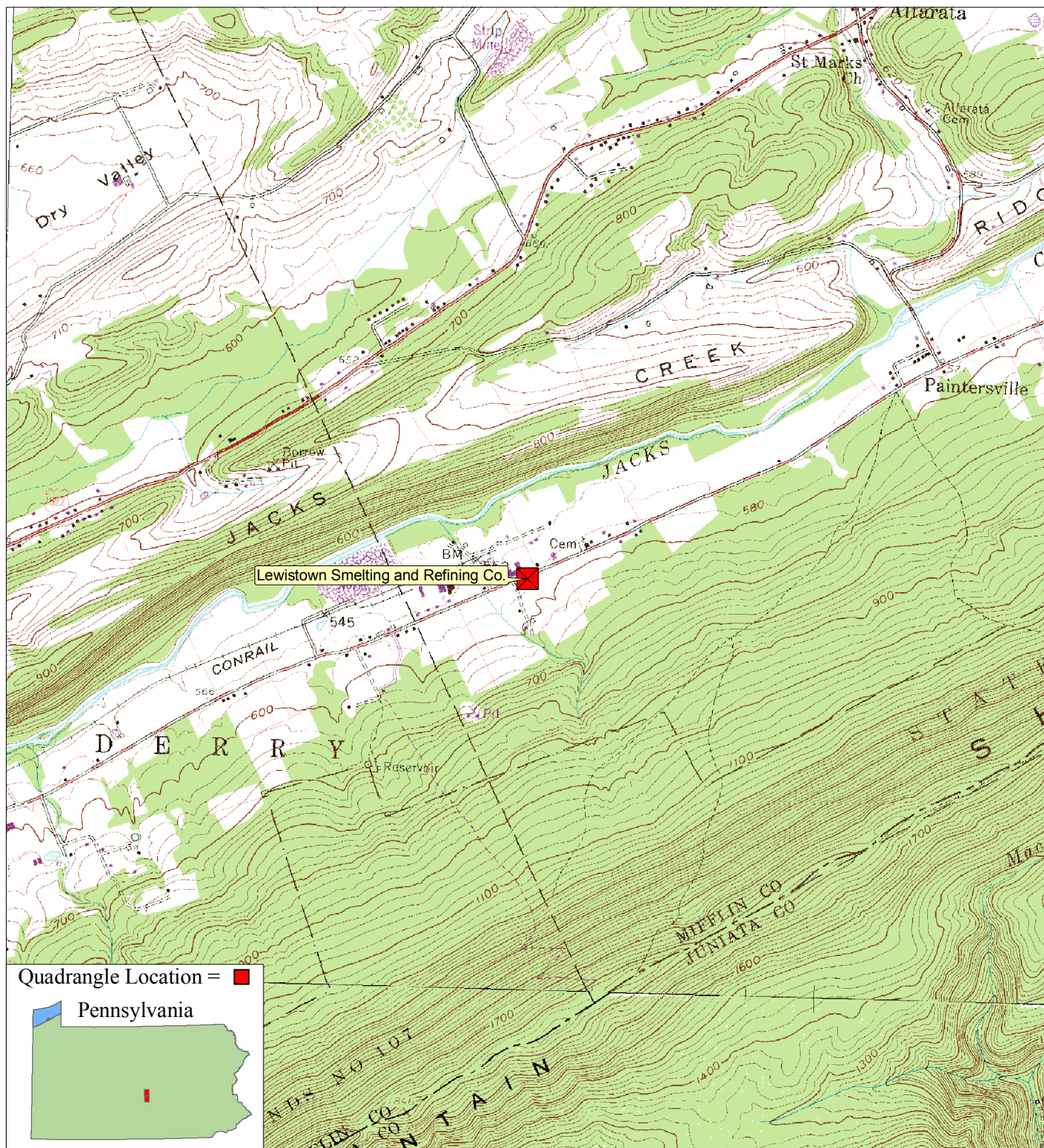
Extensive sampling and removal activities have already taken place on site at the former lead smelter site. A soil sample was also collected on site near the property boundary to the closest residence. Lead levels in this sample were below site clean-up standards (Ref. 7). However, to determine if there is a threat to the residential population from elevated levels of lead in soils, it is recommended that soil samples be collected from nearby residential yards and analyzed for lead levels.

REFERENCES

1. Eckel, W.P., Rabinowitz, M.B., Foster, G.D. American Journal of Public Health. "Discovering Unrecognized Lead-Smelting Sites by Historical Methods". April 2001.
2. Pennsylvania Department of Health. Suspected Former Lead Smelter Sites: A Potential Risk Factor for Childhood Lead Poisoning. August 2004.
3. U.S. Environmental Protection Agency (EPA). Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive 9355.4-12. July 14, 1994.
4. EPA. Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS) database. On-Line Address: <http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm>
5. EPA. First Five-year Review Report for the Jack's Creek/Sitkin Smelting and Refining, Inc. Philadelphia, Pennsylvania. April 2006.
6. U.S. Census Bureau. State and County Quick Facts. Accessed On-Line on December 6, 2005. On-Line Address: quickfacts.census.gov/qfd/states/42.html.
7. Tetra Tech Em Inc. Email Regarding Sampling of Adjacent Properties Between Nancy Shannon, Environmental Scientist. And Rashmi Mathur, Remedial Project Manager, EPA Region 3.

Appendix A

Figures



0 0.25 0.5
Miles
Scale in Miles

Lewistown Smelting and Refining Co.
3100 Back Maitland Road
Maitland, Mifflin County, Pennsylvania
Eckel Site No. 302

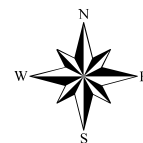


Figure 1
Site Location Map

Source: Modified from USGS 7.5-Minute Series Topographic Quadrangles, Alfarata, Pennsylvania, 1959, Photorevised 1978
Mifflintown, Pennsylvania, 1959, Photorevised 1978





Legend



Approximate Site Location



0.5-Mile Radius

0 500 1,000

 Feet
 Scale in Feet

Lewistown Smelting and Refining Co.
 3100 Back Maitland Road
 Maitland, Mifflin County, Pennsylvania
 Eckel Site No. 302

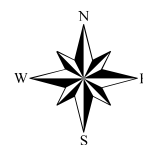
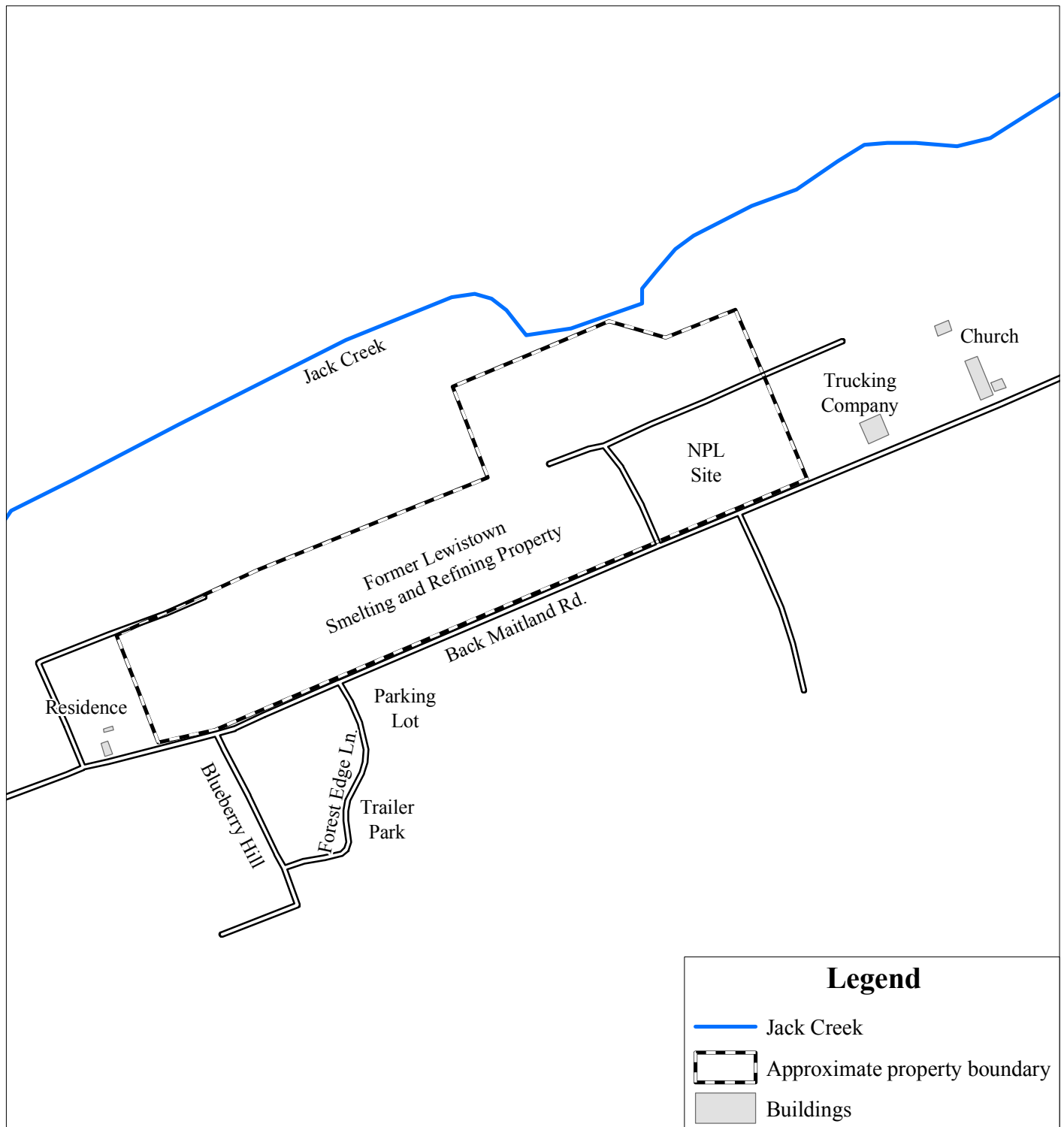


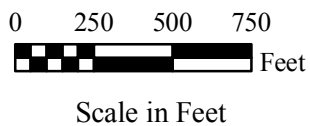
Figure 2
 Aerial Photograph

Source: Modified from Digital Orthophoto (DOQQ) MrSID mosaic for
 Alfarata Quadrangle, 1994.





Note: Site is in a rural area, virtually all land area on this map that is not occupied by buildings is vegetated or otherwise permeable.



Lewistown Smelting and Refining Co.
3100 Back Maitland Road
Maitland, Mifflin County, Pennsylvania
Eckel Site No. 302

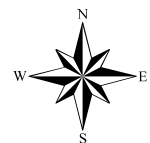


Figure 3
Site Layout

Source: Modified from Digital Orthophoto (DOQQ) MrSID mosaic for Alfarata Quadrangle, 1994.



Appendix B
Photographic Documentation



Photographic Documentation

Client: U.S. EPA Region 3
Site Name: Lewistown Smelting & Refining
Location: Maitland, Pennsylvania
Date: February 28, 2006

Prepared by: Tetra Tech EM Inc.
Photographer: [REDACTED]
Project Number: I4185475020903

Photograph No. 1

Photograph Date: February 10, 2006

Orientation: North

Description:

Former smelter site, currently the active junk yard facility – Krentzmen's. Yard is 2-3 acres of miscellaneous materials.



Photograph No. 2

Photograph Date: February 10, 2006

Orientation: Northwest

Description: Area listed on the NPL site. 145 cubic yards of soil was removed.





Photographic Documentation

Client: U.S. EPA Region 3
Site Name: Lewistown Smelting & Refining
Location: Maitland, Pennsylvania
Date: February 28, 2006

Prepared by: Tetra Tech EM Inc.
Photographer: [REDACTED]
Project Number: I4185475020903

Photograph No. 3

Photograph Date: February 10, 2006

Orientation: North

Description: Residential property with playground directly west of the former smelter.



Photograph No. 4

Photograph Date: February 10, 2006

Orientation: South

Description: Residential trailer park directly across the street from the site.





Photographic Documentation

Client: U.S. EPA Region 3
Site Name: Lewistown Smelting & Refining
Location: Maitland, Pennsylvania
Date: February 28, 2006

Prepared by: Tetra Tech EM Inc.
Photographer: [REDACTED]
Project Number: I4185475020903

Photograph No. 5

Photograph Date: February 10, 2006

Orientation: Northwest

Description: Neighboring church has a picnic area and playground. To the right (not in picture) is a baseball field.



Photograph No. 6

Photograph Date: February 10, 2006

Orientation: Southwest

Description: Elementary school located approximately 1 mile from the site.

